

# Use Tableau with Apache Kylin

Date: August 2016

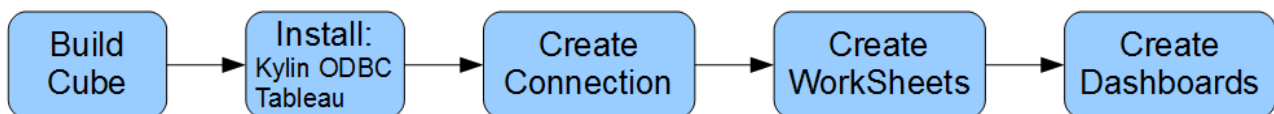
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## Intro

We can use [Quick Start with Sample Cube](#) of Kylin Project to make an example of integration with Tableau Software



## Pre-requisites

The First, you need Build Kylin Cube: [Quick Start with Sample Cube](#): With Step 5, you can check the result cube executing:

```
select part_dt, sum(price) as total_selled, count(distinct seller_id) as sellers from kylin_sales group by part_dt order by part_dt
```

Query results:

**Results (731)**

| PART_DT ▾  | TOTAL_SELLE... | SELLERS ▾ |
|------------|----------------|-----------|
| 2012-01-01 | 466.9037       | 12        |
| 2012-01-02 | 970.2347       | 17        |
| 2012-01-03 | 917.4138       | 14        |

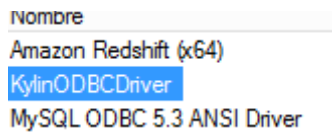
Second, Install [Tableau Desktop 9.3.3](#) On windows

## Used Software

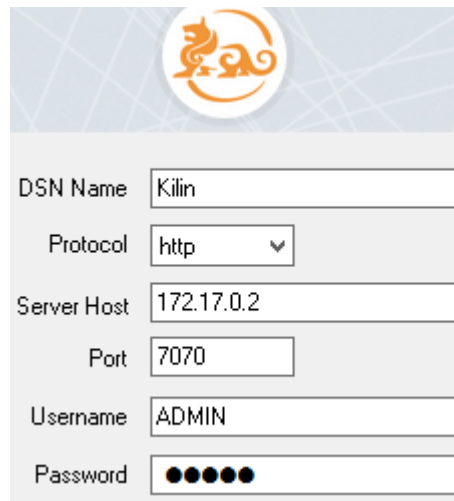
- [Kylin: 1.5.2](#)
- [Kylin ODBC 1.5](#) (Don't use v1.3, don't work)
- [Tableau Desktop 9.3.3](#)

# Create Connection

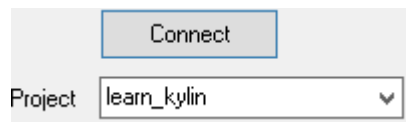
1. [Install Kylin ODBC](#)
2. Add DNS System in Windows



3. And configure: User-name /Password: ADMIN / KYLIN

A screenshot of the Kylin ODBC configuration window. It features the Kylin logo at the top. The fields are: DSN Name (Kilin), Protocol (http), Server Host (172.17.0.2), Port (7070), Username (ADMIN), and Password (masked with dots).

4. Click Connect and Choose the project

A screenshot of the Kylin ODBC Connect dialog. It shows a 'Connect' button and a 'Project' dropdown menu with 'learn\_kylin' selected.

5. Click on “Done”
6. Download and install Tableau Desktop and launch it
7. **Connect** > **More Servers...** > **Other Databases (ODBC)**
8. **Driver:** **KylinODBCDriver** > **Connect**
9. Complete details connections (ADMIN /KYLIN), click done, click OK:

Protocol

Server Host

Port

Username

Password

Project

10. Click on **Select Database** > **defaultCatalog** > **Enter table...** (In **magnifying glass**)

The result must be, three new tables (on left panel):

☒ Exact ☐ Contains ☐ Starts with

- ☒ KYLIN\_CAL\_DT (DEFAULT.KYLIN\_CAL\_DT)
- ☒ KYLIN\_CATEGORY\_GRO...ATEGORY\_GROUPINGS)
- ☒ KYLIN\_SALES (DEFAULT.KYLIN\_SALES)

NOTE: Sometimes it doesn't work fine, Solution: close and open Tableau :)

11. Add this tables to Tableau: Drag and Drop to **Drag tables here**

- First "Kylin\_sales" (Fact Table) and second "Kylin\_Cal\_DT" (Dimension table)



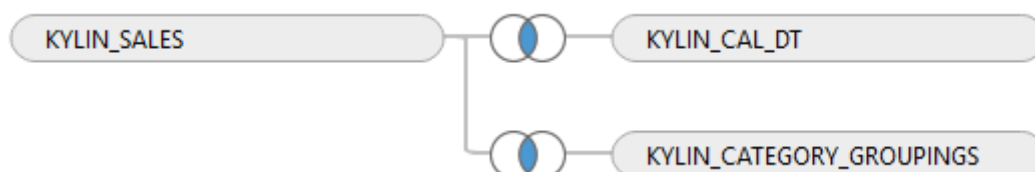
And Join Relation:

| Data Source |   | KYLIN_CAL_DT |
|-------------|---|--------------|
| Part Dt     | = | Cal Dt       |

- Now the same with "Kylin\_Category\_Groupings"

| Data Source   |   | KYLIN_CATEGORY_GROUPI...     |
|---------------|---|------------------------------|
| Leaf Categ Id | = | Leaf Categ Id (Kylin Cate... |
| Lstg Site Id  | = | Site Id                      |

- The result must be:



Update Now







- Now if you click: , you must see data table:

|  KYLIN_CAL_DT<br>Week Beg Dt |  KYLIN_CAL_DT<br>Cal Dt | Abc<br>KYLIN_CATEGORY_GROUPINGS<br>User Defined Field1 | Abc<br>KYLIN_CATEGORY_GROUPINGS<br>User Defined Field3 | Abc<br>KYLIN_CATEGORY_GRO...<br>Upd Date | Abc<br>KYLIN_CATEGORY_GR...<br>Upd User |
|---------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|------------------------------------------|-----------------------------------------|
| 01/01/2012                                                                                                    | 01/01/2012                                                                                               | 11                                                     | Collectibles                                           | 2012-09-11 20:26:...                     | USER_Y                                  |
| 01/01/2012                                                                                                    | 01/01/2012                                                                                               | 4                                                      | Business (Office & Ind...                              | 2013-04-28 20:37:...                     | USER_Y                                  |
| 01/01/2012                                                                                                    | 01/01/2012                                                                                               | 9                                                      | Apparel                                                | 2013-09-10 16:52:...                     | USER_Y                                  |
| 01/01/2012                                                                                                    | 01/01/2012                                                                                               | 9                                                      | Apparel                                                | 2013-07-16 08:23:...                     | USER_Y                                  |
| 01/01/2012                                                                                                    | 01/01/2012                                                                                               | 12                                                     | Computers                                              | 2012-05-01 08:54:...                     | USER_Y                                  |
| 01/01/2012                                                                                                    | 01/01/2012                                                                                               | 11                                                     | Collectibles                                           | 2008-06-03 13:36:...                     | USER_Y                                  |
| 01/01/2012                                                                                                    | 01/01/2012                                                                                               | 0                                                      | Apparel                                                | 2013-09-11 20:26:...                     | USER_Y                                  |

## Intro to Sheet Elements

Go to Sheet 1: Sheet 1

You must see the Dimensions in left panel

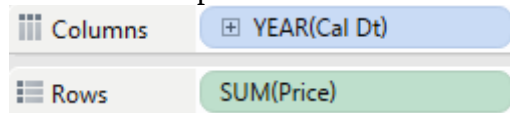
| Dimensions |                                                                                                                  |
|------------|------------------------------------------------------------------------------------------------------------------|
| ▲          |  <b>KYLIN_CAL_DT</b>          |
|            |  Cal Dt                       |
|            |  Week Beg Dt                  |
| ▲          |  <b>KYLIN_CATEGORY_GRO...</b> |
|            | Abc Categ Lvl2 Name                                                                                              |
|            | Abc Categ Lvl3 Name                                                                                              |
|            | # Leaf Categ Id (Kylin Cat...                                                                                    |
|            | Abc Meta Categ Name                                                                                              |
|            | # Site Id                                                                                                        |
|            | Abc Upd Date                                                                                                     |
|            | Abc Upd User                                                                                                     |
|            | Abc User Defined Field1                                                                                          |
|            | Abc User Defined Field3                                                                                          |
| ▲          |  <b>KYLIN_SALES</b>           |
|            | # Leaf Categ Id                                                                                                  |
|            | Abc Lstg Format Name                                                                                             |
|            | # Lstg Site Id                                                                                                   |
|            |  Part Dt                      |
|            | # Seller Id                                                                                                      |
|            | Abc Measure Names                                                                                                |

And measures:

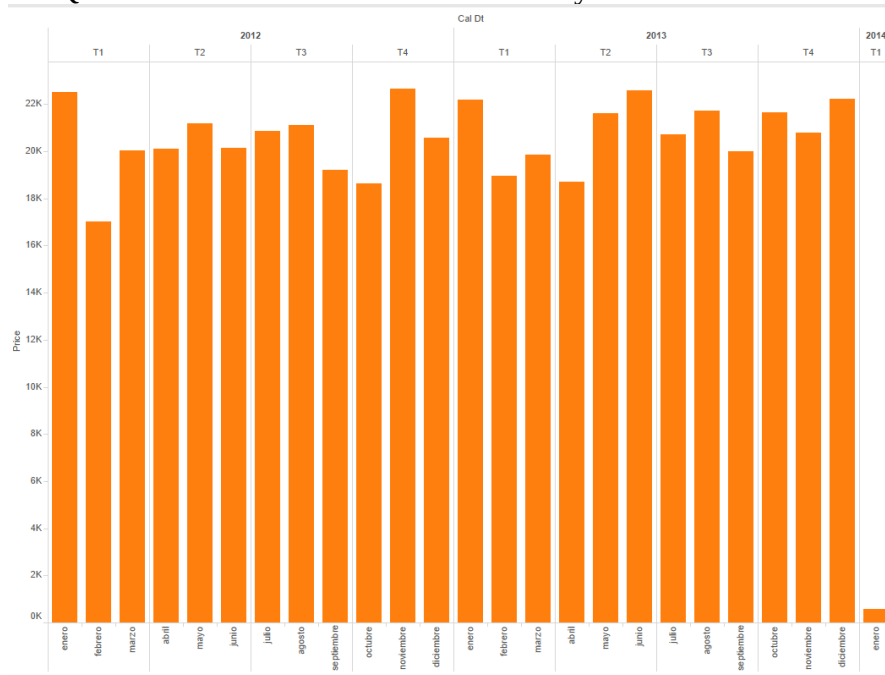
| Measures |                   |
|----------|-------------------|
| #        | Price             |
| =#       | Number of Records |
| #        | Measure Values    |

# Our First WorkSheet

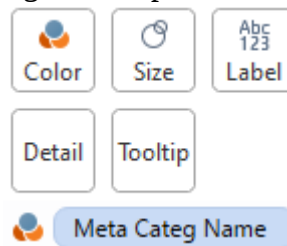
Drag and Drop “Cal\_Dt” and “Price” like in picture:



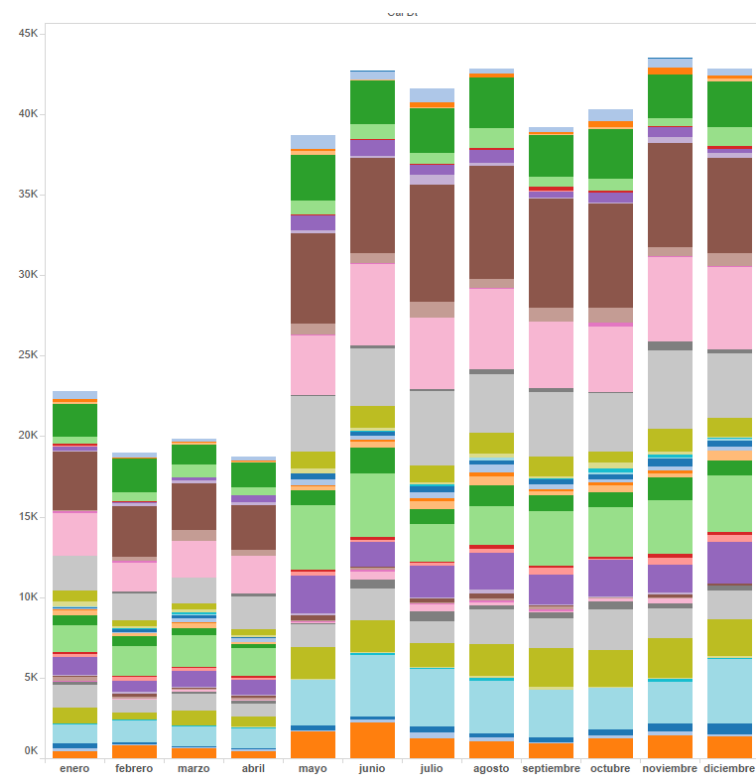
You can expand to Quarter and Months: Click on “Plus” of year: 



We can add sub-totals by category: Drag and Drop “Meta Categ Name” to “Color”



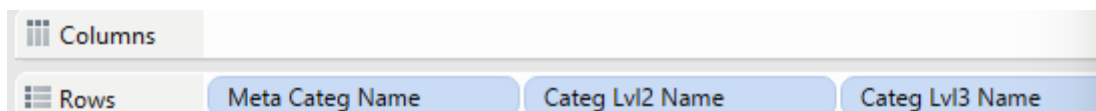
The result must be similar to:



## Second Worksheet

Create new Worksheet 

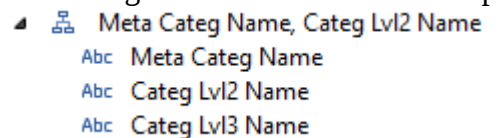
Drag and Drop:



After than we can see the relations between “Meta Categ Name”, "L2" and "L3":

| Meta Categ Name           | Categ Lvl2 Name              | Categ Lvl3 Name               |
|---------------------------|------------------------------|-------------------------------|
| Abbigliamento e accessori | Donna: Accessori             | SciarpFoulard e Scialli       |
| Baby                      | Baby Clothing                | Boys                          |
|                           |                              | Unisex                        |
|                           | Nursery Decor                | Night Lights                  |
| BookMagazines             |                              | Comic Books                   |
|                           | Children's Books             | Children's Books              |
| Books                     | First Editions               | Other                         |
| Business & Industrial     | Electrical & Test Equipment  | Test Equipment                |
|                           | Heavy Equipment              | Antique & Vintage Farm Equip  |
|                           | Light Equipment & Tools      | Air Tools                     |
|                           | Manufacturing & Metalworking | Metalworking Tooling          |
|                           | MRO & Industrial Supply      | Pumps & Plumbing              |
|                           | Printing & Graphic Arts      | Commercial Printing Presses   |
|                           | Retail & Services            | Jewellery Packaging & Display |
|                           |                              | Jewelry Packaging & Display   |
| Cameras & Photo           | Camera & Photo Accessories   | LCD Hoods                     |
|                           | Film Photography             | Other                         |

Delete 3 the three fields in “Rows” and generate a hierarchy: using Dimensions Menu (Left side)  
 Drag and Drop “Lvl2” over “Meta Categ Name” and after D & Drop “Lvl3”, the result must be:



Drag and Drop the New hierarchy on “Rows” and expands

| Meta Categ Name           | Categ Lvl2 Name             | Categ Lvl3 Name          |
|---------------------------|-----------------------------|--------------------------|
| Abbigliamento e accessori | Donna: Accessori            | SciarpFoulard e Scialli  |
| Baby                      | Baby Clothing               | Boys                     |
|                           |                             | Unisex                   |
|                           | Nursery Decor               | Night Lights             |
| BookMagazines             |                             | Comic Books              |
|                           | Children's Books            | Children's Books         |
| Books                     | First Editions              | Other                    |
| Business & Industrial     | Electrical & Test Equipment | Test Equipment           |
|                           | Heavy Equipment             | Antique & Vintage Farm E |
|                           | Light Equipment & Tools     | Air Tools                |
|                           |                             |                          |

123 123  
 123 123  
 123 123

Change the diagram type to table:

Drag and Drop “Price” to Rows, and see total at right of table:

| Meta Categ Name           | Categ Lvl2 Name  |       |
|---------------------------|------------------|-------|
| Abbigliamento e accessori | Donna: Accessori | 76    |
| Baby                      | Baby Clothing    | 1.241 |
|                           | Nursery Decor    | 5.074 |



Now you can change the graph type:

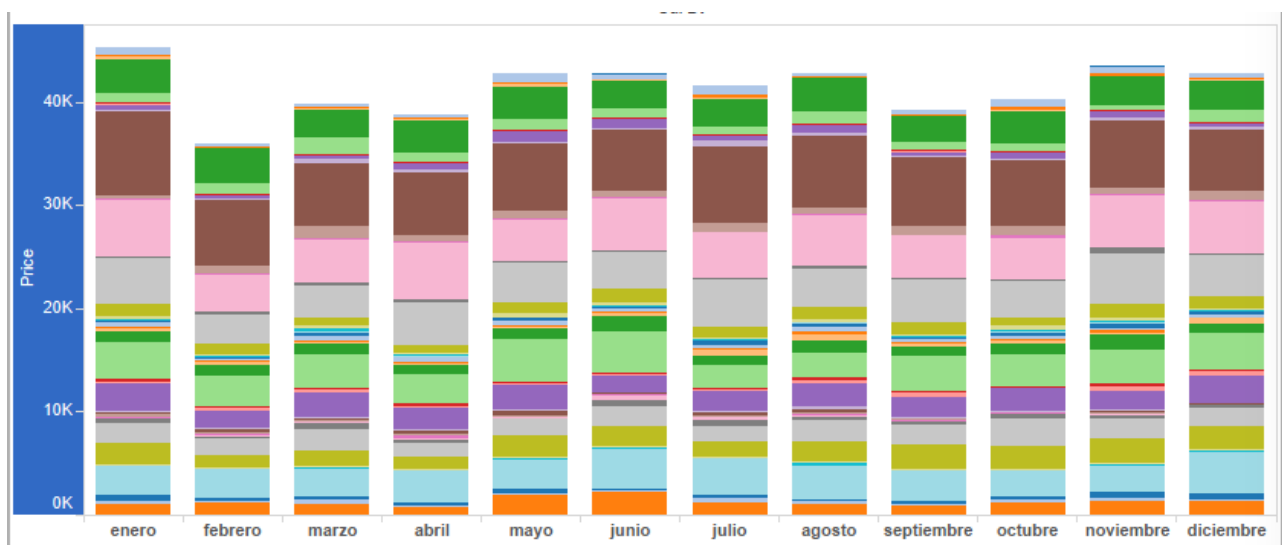
| Meta Categ Name           | Categ Lvl2 Name  |  |
|---------------------------|------------------|--|
| Abbigliamento e accessori | Donna: Accessori |  |
| Baby                      | Baby Clothing    |  |
|                           | Nursery Decor    |  |
| BookMagazines             | Children's Books |  |

## Create Dashboard



Create New Dashboard

Drag and Drop WorkSheet\_1 and WorkSheet\_2

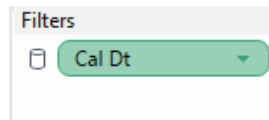


### Hoja 2

| Meta Categ Name           | Categ Lvl2 Name              |  |
|---------------------------|------------------------------|--|
| Abbigliamento e accessori | Donna: Accessori             |  |
| Baby                      | Baby Clothing                |  |
|                           | Nursery Decor                |  |
| BookMagazines             | Children's Books             |  |
|                           | First Editions               |  |
| Books                     | Electrical & Test Equipment  |  |
|                           | Heavy Equipment              |  |
|                           | Light Equipment & Tools      |  |
|                           | Manufacturing & Metalworking |  |
|                           | MRO & Industrial Supply      |  |
|                           | Printing & Graphic Arts      |  |
|                           | Retail & Services            |  |
| Cameras & Photo           | Camera & Photo Accessories   |  |
|                           | Film Photography             |  |



# Add filter to dashboard

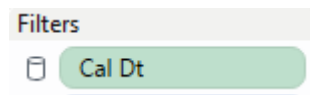


1° Add Filter to Worksheet\_1 :

2° Configure the filter like “All Using this Data Source”



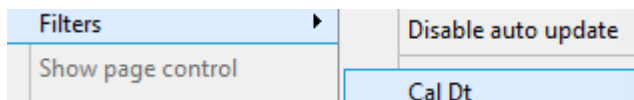
3° Then check the Worksheet\_2 and we will see a new filter has been append:



4° Add filter to dashboard: Select a Worksheet on Dashboard, and right- click on upper edge



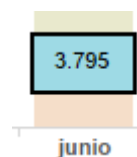
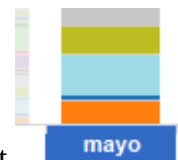
Filter > “Cal Dt”



After that a new right panel will appear:  , this filter will be affect on all Dashboard's Worksheet



Furthermore , you can filter by date, clicking in month, on upper worksheet



Or, you can filter by category, clicking in category too:

# Final Result:

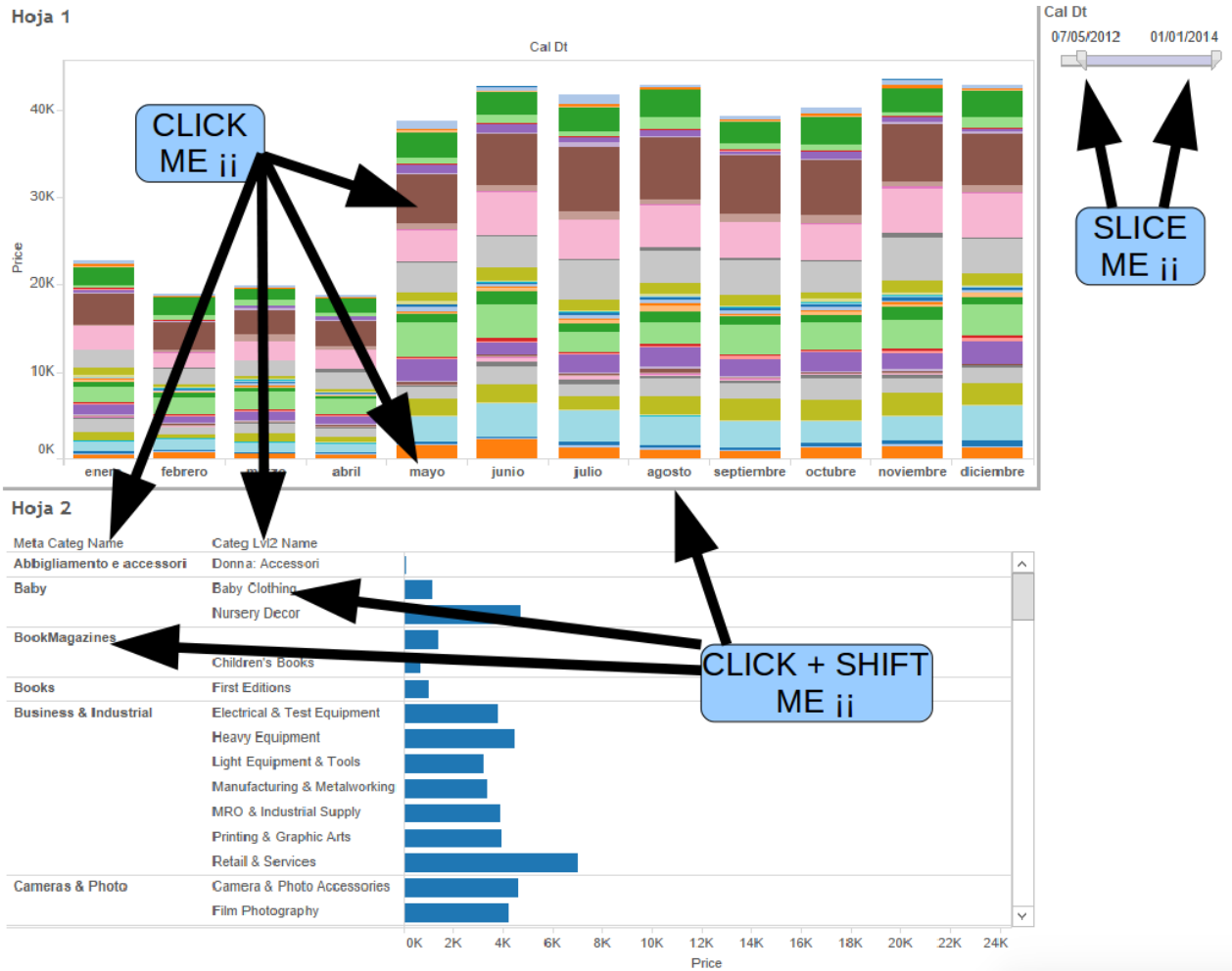


Tableau Files: [Full.twb](#) [OnlyConnection.twb](#)

*For any suggestions, feel free to contact me*  
*Thanks, Alberto*